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**Government of West Bengal**

**State Statistical Bureau**

# **A Note on the Development of Small Industries**



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## STATE STATISTICAL BUREAU, GOVERNMENT OF WEST BENGAL.

### A NOTE ON THE DEVELOPMENT OF SMALL INDUSTRIES.

**1.0. Introduction.**—Before one may proceed to make out a plan for the development of small industries, it would be logical to examine the fundamental principles of the process of industrial evolution, without which it may not be possible to analyse precisely the forces which variously activate the process in large and small industries respectively. Any action taken without such understanding, therefore, would probably be ineffective.

**2.0. Industrial Revolution.**—There has been industrial production ever since the beginning of civilisation, which, however, was mostly localised for many centuries. But the industrial revolution, which is synonymous with the introduction of power-driven machinery, released forces of competition primarily by facilitating communication, which had so long been kept in harness by an elaborate system of guilds in western countries and an equivalent system in this country intergrated with the caste system. Social ties are stronger than economic ties. Prejudices regarding occupation, therefore, still persist in this country but it may generally be stated that in these days competition in any kind of profitable industrial production is restricted only by economic and technical resources. In order to survive in such a competitive market each unit of production must seek advantage as best as it can. In a democratic world one can no longer expect to gain any advantage by the use of force. Increasing rationalisation, therefore, is a necessary condition for survival in these days.

**3.0. Rationalisation.**—Rationalisation in every factor of production is an essential characteristic and is in fact, the guiding principle of industrial evolution. According to the dictionary the expression “rationalisation” means subjection to rational principles and when applied to industry it means reforming by making production balance consumption, by co-operation of rival producers and of capital and labour. In actual practice the scope of the expression has been enlarged to include co-ordination between manual and mechanical effort. Generally speaking, it means not only the elimination of any factor, internal or external, which retards speed or economic effectiveness of production, but also the co-ordination of all factors of production with the sole object of increasing its speed and economic effectiveness, irrespective of any other consideration. Being rational or logical the procedure is one-minded and is accordingly ruthless. The ultimate motive is continuous increase of total “value added” by manufacture at a rate higher than the rate of increase of expenditure. The expression “value added” will be discussed later. It may, however, be noted here that although mechanisation increases the “total” value added by manufacture by increasing the speed of production, the value added per unit product by manual labour may often be higher than the value added by machine. The application of the principles of rationalisation takes different forms in different circumstances but one may generally examine the process by dividing the factors of production into three main sectors, namely,—

- (i) Organisation,
- (ii) Machinery and its use, and
- (iii) Operation.

Organisation includes capital, management, labour, purchase, sales, etc. Rationalisation of these factors takes the form of combination, integration or merger of as many rival interests as possible or the creation of monopolies, with a view to increase bargaining power. This does not require any explanation. It follows directly from the concept itself. There are many examples in this country also. Machinery includes those for the production of goods as well as services like electricity, communication, etc. Its use is commonly understood. Machinery itself may be rationalised by cutting out intermediate operations or integrating several processes into one machine, etc. The operation may be rationalised by co-ordinating manual labour with machinery, developing methods of control permitting simultaneous operation of multiple machines, organising flow of work with a high degree of specialisation permitting the use of mass production technique, etc.

**3.1. Opposing forces within the framework of rationalisation.**—The motive behind rationalisation, as stated earlier, is to get larger “value added” which, however, may or may not yield larger profit. It is very necessary that the two concepts of “value added” and “profit” should be clearly distinguished from each other. Larger value added does not necessarily mean larger profit because, the advantages of rationalisation in this respect are greatly reduced by the contest between two opposing forces within the framework of rationalised organisation itself, namely, capital and labour, for the allocation of the total “value added” amongst themselves. In fact the contest is so severe and its tempo is increasing at such a pace that rationalised industries, in spite of their larger “value added”, must still increasingly rationalise in one or more of the factors of production to avoid loss and even to keep alive.

**3.2. Co-operative forces in rationalisation.**—Apart from the above contest within its own framework, each establishment has to enter into a contest with rival producers within the country and outside. In this contest, however, there is complete co-operation between capital and its labour because, increased “value added” increases the share of each. Rationalisation, therefore, gains momentum directly in proportion to the efficiency of both capital and its labour. In highly industrialised countries labour co-operates enthusiastically and with intelligence in the use of machinery and in the operative processes. Coupled with rationalised use of machinery and rationalised operation, augmented by rationalised capital, management, purchase and sale, the above combination of capital and labour constitutes a formidable and aggressive force. It will be clear, therefore, that the peculiarities of the industrial process are such that comparatively inefficient, that is, less rationalised contestants, in respect of any of the factors of production, must gradually be weeded out, other conditions remaining the same.

**3.3. Conditions for success or failure of rationalisation.**—As explained above the following factors ensure success of rationalised industry, namely, (i) rationalised capital, management, purchase and sale, (ii) rationalised machinery and its use, (iii) rationalised operation, and (iv) intelligent and intensive co-operation between capital and labour in (ii) and (iii) above, with the common aim of increasing the total value added by manufacture, which is shared between the two. There are, however, conditions which determine its success or failure to a very large extent. Four of the important conditions are extraneous influences, such as, (1) local patronage within the country, (2) selective customers, (3) Government policy for internal patronage and control and (4) Government policy for controlling competition from outside. The most important condition, however, is within the rationalised system itself, namely, (5) the nature and magnitude of the contest between rationalised capital and rationalised labour, each trying for a larger share of the value added, as explained earlier. There

is, however, a sixth condition. The technique of standardisation is a necessary corollary of rationalisation. This will be explained later. The production of large industries is accordingly being increasingly standardised. But in a poor country, where the market is largely non-selective, standardisation in the general market has no special merit. In fact, it may be a disadvantage in the competition with non-standardised inferior products. In such circumstances we may have another important condition, namely, (6) general economy of the population.

**3.4. Totalitarianism of the spirit and concept of rationalisation.**—It has been explained earlier how within any rationalised establishment there is complete unity of purpose between capital and labour in respect of all the factors of production, namely, organisation, use of machinery and operation, except in so far, that they stand against one another in their respective demands for a larger share of the value added. It is very important to note this point in the preparation of any plan for the development of small industries. In the context of what has been said in connection with the factors of production in rationalised industry, labour must be regarded as a pampered child of capital. The nature of competition between the parent and its progeny has been such that both have rationalised at tremendous speed, particularly since the first world war. Trade unions, local, national and international are evidences on the one hand, incorporated companies and corporations, national and international, are evidences on the other. The net result is, therefore, as follows :—

- (1) On account of the struggle between capital and labour for increasing their respective shares of the value added by manufacture, both of them rationalise increasingly, that is, form larger and larger combines to increase their respective bargaining powers;
- (2) in order to increase the total value added, to be shared between the two, they do away with competition either by eliminating all rival establishments or compelling them to merge with themselves;
- (3) for the same purpose they combine increasingly in order to keep down prices of raw materials and raise the price of consumer goods; and
- (4) in order to create employment for persons, whom they throw out in the process of rationalisation, they create new wants on the plea of increasing the standard of living.

It will be seen, therefore, that both capital and labour are totalitarian in spirit as well as concept. There is ever increasing evidence of corporate activities of labour as well as capital in this country also. I am quoting below some figures regarding rationalisation in the U.S.A., the most highly industrialised country in the world at present, where the co-operation between capital and labour to produce larger "value added" by rationalised production methods, as well as the contest between them for a larger share of the value that they jointly add, have been brought to the highest pitch. Everybody knows about the high incomes as well as high salaries and wages in that country. In the U.S.A., in 1947, there were 247,307 operating manufacturing establishments. But only 113 corporations owned 40·0 per cent. of the total assets of all these manufacturing concerns. The process of merger was continuous. Small mergers were not reported. But between the years 1940 and 1947, 2,450 cases of merger, apparently of big firms, were reported. Each corporation manages innumerable units of production. Regarding the units themselves, I am quoting below concentration ratios, by value of production, of the largest industries of the U.S.A. The ratios are for the first 20 units of production or factories, that is, each ratio represents the percentage of production in the first 20 factories of any class out of the total production of all factories in that class.

## U.S.A., 1947.

Serial No.	Name of industry.	Total number.	Concentration ratio by value in the first 20 factories.
			Per cent.
1.	Motor vehicles and parts .. .. .	779	77·8
2.	Paper and board .. .. .	453	36·5
3.	Petroleum refining .. .. .	277	82·7
4.	Steel works and rolling mills .. .. .	111	81·1
5.	Heating and cooking apparatus .. .. .	792	37·1
6.	Radio and related products .. .. .	799	54·4
7.	Cotton woven fabrics .. .. .	422	40·4
8.	Woolen fabrics .. .. .	427	56·0
9.	Iron foundries .. .. .	1,554	35·3
10.	Metal stamping .. .. .	1,954	37·1
11.	Paints and varnishes .. .. .	1,154	48·2
12.	Meat packing .. .. .	1,999	62·5
13.	Canning and preserving .. .. .	1,856	45·5
14.	Tanning .. .. .	500	55·1
15.	Footwear .. .. .	1,077	45·0
16.	Paper board boxes .. .. .	1,323	40·7
17.	Organic chemicals .. .. .	188	86·4
18.	Soap .. .. .	223	92·7
19.	Flour .. .. .	1,081	56·7
20.	Bread and bakery .. .. .	5,985	36·3
21.	Food preparation .. .. .	1,801	52·8
22.	Men's and boy's suits and coats .. .. .	1,721	26·1
23.	Women's suits .. .. .	2,461	15·1
24.	Newspapers .. .. .	8,115	35·6
25.	Periodicals .. .. .	2,106	57·7
26.	Commercial printing .. .. .	11,810	20·3

On top of this high concentration ratio amongst the units of production, there is merger of controlling interests, resulting in the concentration of 40·0 per cent. of total assets of all industries of the country into the hands of only 113 corporations, as stated earlier. It was not stopping there. It was moving on, as the continuous process of merger would amply illustrate. But the people of the U.S.A. got scared of the power of these totalitarian forces of capital and labour and there has been a reversal of policy during the last few years. Anti-trust laws have been augmented and small industries are being actively supported. They appear to have learnt this lesson from their very large experience of industrial development that small enterprise, which alone provides large opportunity for self-employment, is the major factor in a nation's life, which guarantees freedom of thought and action.

**3.5. Scope of work for small industries under rationalisation.**—Under conditions of totalitarianism, as aforesaid, small industries have no chance of survival unless they are ancillary to or subsidiary of larger industries, on whose patronage their survival would solely depend. Further, standardisation is a necessary corollary of rationalisation. Standardisation of dimensions particularly has rendered it possible to rationalise the ancillary industries also, with the result that the ancillary or subsidiary industries in the highly industrialised countries are also increasingly becoming larger and larger. It will be clear that under such circumstances, unless there is effective interference of extraneous forces, the only scope of work left for small industries is in the field of arts and crafts or such specialised products which may have a selective market. Such market, however, is very limited and is increasingly becoming so under these conditions, as will appear from the data given above in respect of food and clothing industries in the U.S.A. Even the production of literature is rationalised.

There is strong evidence in this country also. Handmade shawls, carpets, utensils, etc., are fast disappearing from the market.

**3.6. Illustration of the effect of rationalisation in West Bengal.**—I may now give some simple illustrations of the effect of rationalisation in this State.

(i) Whoever was living in Calcutta about 40 years ago may remember many scores of chimneys in Tollygunge, Behala and Ultadanga. These were rice mills. Calcutta being more advanced than other areas, the industrialists of Calcutta rationalised rice production, depriving scores of thousands of hand-huskers of the rural areas of their means of livelihood. This was done by a few scores of capitalists and a few thousand factory labourers. Watching the progress of rationalisation of this industry, one could see 20 years later that a large number of those rice mills of Calcutta went out of existence. Many, however, were set up in mofussil areas all over the State. This was rationalisation with a vengeance. As the raw materials were in the mofussil the industrialists of the mofussil districts were able to cut down cost by rationalising transport, successfully eliminating their rivals in Calcutta. There were 140 rice mills in the aforesaid outskirts of Calcutta in 1925, 127 in 1930, 123 in 1935, 102 in 1939 and only 72 in 1952. The rice mills of the mofussil, of course, provided some employment to rural people. But the net result was that thousands and thousands of rural people lost their avocation as rice-huskers all over the State, but only a few of them got employment in rice mills as factory labour. If there was a shortage of man-power in the country making it necessary to release some workers for a national purpose or if there was a surplus of rice which was to be produced as efficiently as possible in order to enable the country to sell them at foreign markets at competitive price, then only such a process of rationalisation might have some justification from the national point of view. But as there is actually a surplus of man-power and shortage of rice, the logic of the rationalised process can only be termed as twisted, twisted deliberately by a handful of organised capitalists and labourers for the sole purpose of appropriating the entire value added by this important food industry to themselves, depriving scores of thousands of small producers of their means of livelihood.

There used to be more than 400 rice mills in West Bengal. On account of Government control of purchase, etc., the number of rice mills in operation in 1952 was about 300. These mills produced about 90 lakh maunds of rice and employed about 13,000 persons in 1952. The production per worker was about 700 maunds per year. Seven hundred maunds could provide full-time employment to about 5 rural hand-huskers per year as would enable them to earn at least as much per head as the other rural people. This could provide continuous full-time employment to 65,000 persons as against 13,000 in rice mills. The data are approximate but are sufficient for the purpose.

(ii) One may also remember a large number of masonry chimneys along Circular Road in North Calcutta. All these were oil mills. Very few of them, however, exist now. There were 43 such mills in 1925, 35 in 1930, 23 in 1935 and 14 in 1946. As in the case of rice mills, the industrialists of Calcutta rationalised the production of mustard oil and successfully eliminated thousands of *ghani* oil producers of the State. But mustard seed is not produced on a large scale in this State and most of the seeds used to be imported from Uttar Pradesh. Mustard oil mills soon started coming up in Uttar Pradesh which, on the advantage of rationalised transport alone, have now eliminated most of the big mustard oil factories of Calcutta. The net result of the process is that thousands of *ghani* oil manufacturers of West Bengal have lost their avocation for the benefit of a handful of industrialists and their labourers in Uttar Pradesh.

(iii) A recent example of increased employment as a result of partial derationalisation may be given from the manufacture of wheat flour in Calcutta. There are about 10 large flour mills in Calcutta which employ about 1,500 workers. During the recent rationing system, when wheat grains were made available to the public for consumption, a large number of small wheat grinding mills came into existence. Until recently there were about 600 such wheat-crushing small factories in Calcutta employing about 2,000 persons. The small wheat mills handled only a fraction of the total production of wheat flour in the large factories. The fraction was actually of the order of one-fourth. It will be seen, therefore, that instead of having 10 big mills and 1,500 workers we could have about 2,400 small establishments and 8,000 workers in Calcutta alone. We could have a chain of such small wheat flour factories all over the State. Similar tales could be told about woven goods, shoes, matches and several others.

3.7. **Government policy and rationalisation.**—If the progress of rationalisation is slow or inadequate, the unit of production becomes vulnerable to competition from other units. If the progress is slow or inadequate in the country as a whole, then its industries become vulnerable to competition from comparatively better rationalised industries of foreign countries. In the latter case extraneous forces, such as, the Government, usually step in to protect the interest of the less rationalised indigenous industries. This action has popular sanction on the plea of nationalism. But within the limits of its own borders *laissez-faire* still prevails very largely and the Government is reluctant to intervene and curb the forces of competition. This also has popular sanction on the plea of free enterprise. Forces of competition within the country, however, may be as deadly and prejudicial to the larger interests of the country as the forces coming from outside through imports. Taking advantage of the Government policy of non-interference in internal competition the industrialist, instead of exploring new avenues, started by eliminating the smallest producers. With the exception of the very laudable attempt of the Europeans who opened up fresh fields of employment in this country in the manufacture of jute, tea, coffee, paper, etc. and a few Indians like J. N. Tata, the industrial process in India, until a few years ago, has mainly been elimination of the small producer by the comparatively bigger. They have thrown out several times more people than they have employed. As long as the field of such exploitation was not saturated, they could not be expected to exert themselves. The inevitable result was inefficiency. On account of the very high development of civilisation in this country, based on an elaborate system of production on the cottage industry scale, the field of exploitation by the rationalised producer was very large. This has contributed towards this inefficiency, encouraged by the policy of non-interference by the Government. Wherever civilisation was less developed, compared with India, at the time of the industrial revolution, the field of such exploitation was limited. For example, manufacture on a cottage industry scale was negligible in the U.S.A. compared with that in India. The rationalised producers of these countries, therefore, had a very strong incentive for opening up new avenues of employment by breaking fresh grounds, that is, producing what they did not produce before and what other countries did not produce or produced inefficiently, being too busy with internal exploitation. This very largely explains why rationalisation has been indifferent in some countries, such as, India and China and very efficient in the U.S.A. General apathy of the nation as a whole towards an industrial type of civilisation probably has little to do with this inefficiency of Indian industry. If there is any truth in the saying that we, as a nation, are averse to the western type of civilisation, whose main characteristic is increasingly higher standard of living by the creation and subsequent satisfaction of new wants, then one could reasonably conclude that either our belief has not the force of conviction or that the people have



no voice, because, otherwise the elimination of millions of small entrepreneurs, who supplied the basic necessities of life, without any national purpose whatsoever, could not have been tolerated.

**3.8. Government policy and indifferent rationalisation.**—Where rationalisation is indifferent it has been successful only against the very small indigenous producer. In this country it has eliminated literally lakhs of small producers without being able to provide alternative employment to 80 to 90 per cent. of the workers whom it has displaced. Rice, flour, vegetable oils, sugar, sheet metal and other metal utensils, spinning, weaving, tanning, footwear, etc., are examples of such industries. Machine production is efficient only in the sense that it produces more in less time. It does not necessarily add more quality or more value to any unit of commodity. But it increases the total value added by manufacture by increasing the units in a given time, that is, by using more raw material per unit of manual labour required for handling the machine. But where the supply of raw material is limited and there is a surplus of manpower, mechanisation has no special merit unless it can increasingly find new raw materials to handle or new goods to produce, the employment in which will balance the unemployment which it increasingly creates. Unless this condition is satisfied, rationalisation of production is mere exploitation of the weak. Yet the Government policy in this country has been such that the process has been allowed to operate. Moreover, some of the aforesaid industries have been so inefficient that they have not been able to shut out foreign goods except with Government aid in the form of protective tariff. The two unco-ordinated policies of internal non-interference and protective tariff, therefore, have been largely responsible for the present situation. It could be shown by a little simple arithmetic that if the quantity of rice, which was distributed by the Government every year through the ration shops, was manufactured on a derationalised system, it could employ 50,000 workers full time. Derationalisation of the production of vegetable oils could employ another 50,000, that of sugar a similar number and that of woven goods several lakhs. It may be noted that even now there are about 120,000 weavers operating in this State as against about 40 thousand workers in cotton mills. Similar things could be said about flour, sheet metal, footwear, etc. Implications of the procedure will be discussed later. It may only be noted at this stage that derationalisation of those industries, which supply the primary necessities of life, as enumerated above, could alone solve a major part of the very serious problem of unemployment in this State. The total number of unemployed in this State, including all urban and rural areas now exceeds 10 lakhs, as shown in the reports on unemployment. Since inefficient and uncontrolled rationalisation has produced this effect it would perhaps not be unreasonable to suggest that a reversal of policy is now indicated. Even the U.S.A. is now advocating a reversal of policy, as shown later. Advantage, however, could be taken of the development of electric power to adjust the degree of derationalisation to suit the present circumstances. It may further be noted that the above industries and others supplying the primary necessities of life are mainly village industries. These are most suitable for the village population and were actually uprooted from the villages. In view of the fact that the Government is now very keen on community development projects in rural areas it is pertinent to point out that the success of the projects will very largely depend on the extent of the reversal of Government policy and the magnitude of active support that the Government may give to the small industries. These should be such as would enable the small producer of the village to recapture the market which he had lost on account of the aforesaid unfair competition. Without a reversal of policy the field of activity of small industries will be increasingly limited reducing it to ancillary or subsidiary activity and perhaps a few arts and crafts which would have special appeal. That it is not a very happy state of affairs, either economically or politically,

has at last been realised even in the U.S.A., as I shall presently show. I shall also presently show how an active policy of support, making many of the advantages of rationalisation available to small industries through legislation, has enabled the small industries of Japan not merely to withstand competition from the large industries but to surpass them in some respects.

**3.9. Government policy and efficient rationalisation.**—In the U.S.A., where rationalisation is very efficient, the process has resulted in the ownership of 40 per cent. of the total assets of all industries by only 113 corporations, as already described earlier. Looking at the course of events in the totalitarian countries, where small enterprises are inevitably eliminated, the American people have come to realise that the development of rationalised industry in their own country has similar characteristics. Accordingly there has been a reversal of policy in that country. The following are quotations from the Economic Reports of the President of the U.S.A. to the Congress, 1947-48 :—

- (i) "The adaptability of the economy to changing circumstances requires the maintenance of active competition which, through amendment and improved enforcement of the anti-trust laws, must be preserved where it exists and revived where it has languished. Collusive monopolistic practices must be eradicated and the trend toward concentration of economic power reversed."
- (ii) "Maximum production must be based upon proof that it is not self-defeating. Only by providing alternative jobs for those who suffer displacement, and by ironing out the fluctuations in business, can we convince both labour and industry that restrictive tendencies are unnecessary for them as well as hurtful to the economy as a whole."
- (iii) "Unregulated private monopoly tends to undermine independent enterprises and to create exaggerated extremes of wealth and power within the country. Strong monopoly elements are likely to retard seriously the cost-price-output adjustments necessary to economic stability with full employment."
- (iv) "In many areas of industry, modern technology requires that firms be of a very considerable size. The best opinion is, however, that the largest enterprises in many industries are larger than is necessary to secure the benefits of technical efficiency. In the future amendment and enforcement of the anti-trust laws, the principle should be followed of checking the further excessive concentration of industrial control and, by protecting the position of smaller competing enterprises, of reversing the past trend toward concentration."
- (v) "I recommend that the Congress review the studies made by the Temporary National Economic Committee and by other Congressional Committees with a view toward supplementing or strengthening existing legislation in this field. Among the steps to be taken is the extension of section 7 of the Clayton Act to prohibit mergers by the acquisition of assets, as well as by the acquisition of stock control."
- (vi) "The Government should take affirmative action to enlarge the opportunities for efficient and enterprising small business."

I believe that the Government should study ways and means of facilitating the availability of long-term credit and equity capital to small and promising business enterprises.

The Department of Commerce has developed, and will further develop, business service programme providing businessmen with such information on markets and technical and commercial facts as only large establishments can provide by their own staff.

Consideration should be given to the impact which existing taxes have upon small and growing business."

The Temporary National Economic Committee, referred to in the President's Report, not only studied how to prevent concentration of the industries, it also set up a Federal Trade Commission one of whose functions was to study details of the workings of industrial enterprises. For example, they made comprehensive examination of unit costs in respect of a large number of industries of various sizes, which showed that smaller establishments scored more often than bigger establishments in respect of lowest unit cost. Results of organisational and technical research are being made available to the small enterpriser. Standard unit cost at each stage of production in respect of each industry is being carefully prepared by the Government and the small enterpriser is being taught in the simplest language how to cost his own products at various stages for the purposes of comparison with the standard. I am giving below a list of the publications issued by the Government for the education of the small enterpriser. These give him all the information that he may require regarding capital, finance, marketing, etc., as well as educative lessons in business organisation, records, accounts, etc.:—

(A) Small business manuals issued by the U.S. Department of Commerce—

- (1) Credit sources for small business.
- (2) Distribution cost analysis.
- (3) Small business and Government regulation.
- (4) Record keeping for small stores.
- (5) Store modernisation check list.
- (6) Veterans and small business.
- (7) What it takes to be a retailer.

(B) Industrial small business series—

- (1) Establishing and operating your own business.
- (2) Establishing and operating a metal working shop.
- (3) Establishing and operating a shoe repair shop.
- (4) Establishing and operating a small sawmill.
- (5) Establishing and operating a grocery store.
- (6) Establishing and operating a service station.
- (7) Establishing and operating an automobile repair business.
- (8) Establishing and operating a beauty shop.
- (9) Establishing and operating real estate and insurance brokerage business.
- (10) Establishing and operating a painting and decorating contracting business.
- (11) Establishing and operating an electrical appliances and radio shop.
- (12) Establishing and operating retail bakery.
- (13) Establishing and operating a hardware store.
- (14) Establishing and operating an apparel store.
- (15) Establishing and operating a dry cleaning business.
- (16) Establishing and operating a laundry.

**(C) State of New York Department of Commerce Small business series—**

- (1) Starting our own small business in New York State.
- (2) Financial services for a small business.
- (3) Picking a location for a small business.
- (4) Insurance for a small business.
- (5) Purchasing and inventory control for a small business.
- (6) Record keeping for a small business.
- (7) Advertising for the small business.
- (8) Use and control of credit in a small business.
- (9) Regulations affecting small business.
- (10) Publications for a small business.

**3.10. Effect of reversal of policy in Japan.**—That a change of policy in this regard can actually produce results has been proved in Japan. In between the two wars Japan captured world market in many commodities, such as, glassware, enamel hardware, celluloid articles, pencils, hats, umbrellas, tinned foods, electric bulbs, rubber goods, bicycles, brushes, etc. There were other commodities also. But each of the aforesaid commodities was the product of small industries. One may remember that Japan at that time was charged with dumping of exchange and exploitation of labour. Whatever may have been the merits of the charges, the fact remains that the above exports came out of the small industries and not the big industries of Japan. It has been estimated that 60 to 70 per cent. of the total exports of Japan in between the two wars came out of the small industries. Investigation showed that the small industries of Japan had themselves taken a lesson out of the big industries and had adopted the technique of rationalisation to a large extent in order to be able to compete with them. A report quoted an interesting example of 70 small textile manufacturing establishments situated in villages in Sennan district, near Osaka. At one end of the district they built a dye works, where yarns bought by them jointly from one of the Osaka mills were brought in trucks, also provided by them jointly. Yarns, after being dyed, were distributed to individuals and again collected when woven as striped stuffs. This product was then taken to a common finishing works, finished, inspected, packed and delivered jointly to export houses of Osaka.

Organisation like the above example could not possibly succeed effectively without Government aid. It may be noted that at that period the small industries of Japan, that is, establishments having one to five workers, provided more than 50 per cent. employment to industrial workers. This is very similar to the conditions now prevailing in West Bengal. But the Government of Japan, on account of the importance of the small industries as providers of employment, considered it their duty to come to the aid of the small industries in their attempt at rationalisation of the above kind. Two very important actions taken by the Japanese Government were (i) legislation with a view to rationalise the co-operative movement and (ii) technical aid at standardisation with a view to decentralisation of production.

In 1925 a law was passed regarding association of manufacturers. This enabled the associations to serve as an organ for control of production and prices as well as that of qualities of products and also to act as an organ for co-operative production. The law provided that small producers engaged in any particular type of industry, within a specified locality, should combine in an association with the consent of a majority, which should decide the quantities to be produced by the industry as a whole and also the quotas to be allotted to each. This is very much like what combines of big industries do. The quota system of production of tea and jute factories are examples in this country.

If the same industry was carried on in more than one locality, then the manufacturers were to form national federation of local associations in order to make the control effective. The association provided its own inspectors for the purposes of enforcing the provisions, under the supervision of the Government. But in many important industries the Government directly provided all the inspectorates. One might say that we have a large number of co-operatives in this country also, who have very similar functions. But there is a fundamental difference between the two systems. It will be noticed that the co-operative system of Japan was rationalised to a high degree. In this country it is not. Rationalised co-operative system of Japan took away the advantage of rationalised big industries in respect of capital, management, purchase of raw materials and sale of finished goods.

The Government of Japan also provided for research for the standardisation of finished goods as well as intermediate products and component parts. There was an institute for scientific research, whose Director himself was an enthusiast in this direction. From his own experiments on the manufacture of piston-rings and from several other experiments carried out by other research workers, he was able to find ways and means for manufacturing even complicated machinery by distributing the manufacture of its parts amongst small establishments scattered in the villages. A bicycle is not a very complicated machine but we know that its manufacture is not easy either. In fact, Indian manufacturers have not been able to manufacture bicycles successfully as yet. But we all know how largely Japanese bicycles were imported into this country before the last war and at what competitive price. All these Japanese bicycles came out of the small industries of Japan organised in the above manner.

**4.0. Standardisation as an aid to rationalisation as well as derationalisation.—** Without going into technical details one may say that standardisation may be divided into three sectors, namely, (1) dimensions, (2) quality and (3) performance. Standardisation of dimensions ensures replaceability, that of quality ensures equivalent durability and that of performance ensures synchronised motion and speed. Rationalised industry is mass produced, often in different units in the same country or scattered all over the world, located according to accessibility to raw material or availability of cheap labour. It will be seen, therefore, that standardisation is a necessary corollary of rationalisation. The purpose of standardisation, however, could be reversed. Taking the Japanese example of manufacturing bicycles and similar other machines, it may be pointed out that from the view point of an engineer there is nothing surprising in the method of decentralisation of production adopted by the Japanese scientists. Without going into details about the engineering processes involved in the manufacture of machines and mechanical devices, one may state that in most of these machines and mechanical devices there are usually only a few heavy parts or other parts of precise measurements, which cannot be conveniently handled by small industries. By far the largest number of parts are small and not so precise in measurements, whose manufacture on a small industry scale is only a question of organisation. This is where standardisation comes in. I may not go into a discussion on the technique of engineering standardisation here. It is hoped that it will be understood that if any part of a machine was designed with such tolerances of dimensions that the part would be producible by the available machinery, then it would be immaterial whether a particular part was manufactured in a number of similar machines located in a single factory or distributed over several small factories. The only condition is that there should be proper quality control and inspection, which would ensure complete replaceability of any part made by any small factory by a similar part manufactured in another small factory. If the distribution of the material, collection of products from individual establishments and the

assemblage of the various component parts of a machine could be organised properly, there is no reason whatsoever why the manufacture of any complicated machine or mechanical device should not be decentralised in the above manner. Adoption of a similar technique has also been successful in some of the industries of Switzerland, for example, the manufacture of watches.

4.1. One could recommend that the Government should, in the first instance, set up a body of men under suitable guidance to make intelligent and intensive study of what is being done in other countries in this regard, particularly in Japan, Switzerland, Scandinavian countries, etc. In fact, such study should be a continuous process in order to be able to take advantage of any technique in respect of any industry as soon as it is invented.

**5.0. The present problem of West Bengal.**—The comparative inefficiency of rationalised large industries of the country has enabled a fair number of enterprising small industries to compete with them successfully in a co-extensive market. The following small industries of Calcutta are examples, namely, wheat flour, bakery and biscuits, vegetable oil, soap, tanning, glass, plywood, paper products, cotton textiles, chemicals, sheet metal products, general engineering, footwear, rubber, woodware, printing, hosiery, etc. The total number of persons employed in large industries in West Bengal, which is industrially the most advanced State in India, is of the order of seven lakhs, whereas, the number employed in small industries is still of the order of eight and a half lakhs. In view of the above facts, one should ponder and think whether large industries offer better opportunities for relieving this tremendous volume of unemployment than the small industries. In a country having an excess of population, rationalisation of production would appear to have an opposite tendency. This, however, may not be correct. Speaking generally it may be correct if rationalisation is achieved only partially that is, enough to kill a few more small industries but not sufficient for opening up fresh avenues of employment. On the other hand, it may be correct if optimum efficiency could be obtained as would enable the manufacturing industry as a whole to employ more workers by using more raw materials and producing more goods at an increasing rate. This, however, is entirely hypothetical. It will be shown later that the U.S.A., the most highly industrialised country in the world, was on the verge of collapse for over a decade immediately before the last war. The degree of unemployment in that country during the aforesaid period was as severe as it is now in Calcutta.

5.1. There is also a very large ethical question associated with large scale mechanisation. There are countries at various stages of industrial development. One could examine critically the conditions prevailing in these countries and the changes which have already been brought about in our own country and make an intelligent assessment of the changes that are likely to occur in our thoughts and aspirations if production is mechanised more intensively. A large number of statistical surveys on the economic aspects of life, associated with the large industries, has been carried out in different States of India. But no one appears to be sufficiently interested in the sociological aspects. Anyone, who has had intimate contact with life associated with the large industries, would be able to testify that a survey of sociological aspects would be very revealing. The magnitude of the offensiveness and its repercussion on the life of the society as a whole, even on its political inclination, does not appear to be generally appreciated.

5.2. Moreover, there is the immediate problem of finding the capital for such a venture. The data from the census of manufacturing industries published by the Government of India, in respect of 29 of the most important classes of industries of the State, which employed about 5 lakhs of persons, show that

the invested capital in these industries was about Rs. 141 crores. This is an underestimate because it takes the invested value of fixed assets. At the present market value the capital required for setting up new establishments would be very much higher. On the other hand, the small industries of Calcutta alone employ about 1·2 lakh persons with a capital of about Rs. 15·7 crores, as shown in my statistical report on small industries. On a *pro-rata* basis the small industries would require less than half of what the big industries would require. This is only a very rough estimate. There are a good deal of other considerations. But the data would be dimensionally correct and could serve as a basis for discussion. In this connection it is very important to note that the small industries of Calcutta, which have been referred to above, are not of rural type. As I have shown in my report on the subject, a large number of these small industries have co-extensive markets with big industries and compete with them successfully. In the case of rural industries the proportion of capital required would be very much less. With derationalisation the required capital to be invested would only be a fraction.

Leaving aside ethical and other considerations, the aforesaid advantage of small industries over large industries, in respect of the capital to be invested, alone would justify a reversal of policy.

**6.0. A plan for development.**—In the foregoing pages I have described in some detail the principles underlying the process of industrialisation in this country and abroad. I have also described the various effects it has produced in different countries and indicated the causes of unemployment in this country. The plan proposed hereafter will describe the direct measures which should be taken to assist the small industries in their struggle for existence against rationalised industries. Before describing the plan itself, however, it is necessary to discuss certain questions of broad policy which shall ultimately determine the success or failure of the plan to achieve and continue to achieve the objectives in the face of opposition from ever-increasing rationalisation of large industries in this country and abroad. It is, therefore, proposed first to examine the purpose and necessity of manufacture.

6·1. There are two main objects which necessitate manufacture, namely, (1) full employment and (2) adequate supply of goods and services for the maintenance of life.

6·2. Regarding (1), that is, full employment, one may start with the assumption that full employment is a necessary condition for normal and healthy social life. This at once leads to the question as to who should be regarded as employable persons. If all the persons, both male and female, between the ages of 16-60 years, and even beyond these limits, were to seek employment, then the total unemployed in the State of West Bengal at present would be much more than one million, which has been reported to the Government in the statistical reports of the Bureau. Fortunately they do not. The various reports on unemployment submitted to the Government show that women mostly do not want any employment; but the tendency is there because thousands of them seek part-time employment. Unemployment is comparatively somewhat less severe in other areas of the State, but in the city of Calcutta about 23 per cent. of the total labour force are now unemployed, total labour force being defined as the total number of persons now in full-time employment *plus* the number of persons who are not in full-time employment but seeking such employment. The situation, therefore, is anything but satisfactory. It may be of interest to see what other countries did in similar circumstances. In this connection it should be noted that percentages of unemployed as shown by the statistics of different countries are not strictly comparable because the percentages of seekers of employment are different.

Approximate percentages of persons in the labour force by sex and broad age groups for Calcutta and the U.S.A. are given below for the purposes of comparison:—

Age group.					Percentage in labour force in Calcutta (1953).	Percentage in labour force in the U.S.A. (1950).
Years.						
<i>Male.</i>						
16-20	..	..	..	..	71.0	57.1
21-60	..	..	..	..	94.6	94.3
Above 60	..	..	..	..	53.3	61.6
Total					89.3	85.8
<i>Female</i>						
16-20	..	..	..	..	3.5	35.7
21-60	..	..	..	..	12.1	36.7
Above 60	..	..	..	..	7.2	16.1
Total					10.0	33.0

It will be noticed that only in the case of young males the percentage in the labour force is higher in Calcutta than in the U.S.A. The percentages of adult males are almost the same in the two countries. But the percentages are much higher in the U.S.A. in respect of old men, young girls, adult women as well as old women. One may reflect on this side of the brilliant picture of industrial efficiency and high standard of living in the U.S.A. The very large preponderance in the U.S.A. of employment seekers amongst those age as well as sex groups, which, according to Indian sentiments, should be protected from having the necessity to join in the economic struggle for existence, is not an expression of freedom, as I shall presently show. It is an economic necessity, even in the cases of old men and women. According to authoritative opinion of the economists of U.S.A. old men and old unmarried, widowed and divorced women, whose number is indeed very large, seek employment in large numbers because they must. In spite of the fact that almost every old man and old woman is entitled to a pension at the rate of one-third of average income, the complete disruption of the joint family system does not allow him or her to carry on anything but a miserable existence in the atmosphere of very 'high standard of living. Although old people, women and young girls in this State do not as yet crowd the market for employment as they do in the U.S.A., the total number of seekers amongst them at present, who may be regarded as the marginal labour force, is significant in view of the degree of unemployment amongst the main labour force, which may be defined as males between the ages of 20 and 55 years. Of course, unemployment cannot be eliminated altogether. There will always be some fractional unemployment in an industrial development process on account of continuous change of technique and processes of manufacture. But this should not normally exceed 2 or 3 per cent. of the total labour force. In Calcutta, however, it is now of the order of about 23 per cent. One may again remark in passing that such a state of affairs would have surely brought about a collapse in the economy of a highly industrialised society, protected though it is by unemployment insurance, old age pension, etc. In the U.S.A. unemployment started rising from 1929, when it was 3.3 per cent. of the total labour force. It rose to 8.6 per cent. in 1930, 15.9 per cent. in 1931, 23.5 per cent. in 1932, 24.8 per cent. in 1933, which was the peak period of unemployment. It continued to be high until the second war. It was 19.0 per cent. in 1938, 17.2 per cent. in 1939, 14.6 per



cent. in 1940, 10.0 per cent. in 1941, and 4.8 per cent. in 1942. It went down to a minimum of 1.3 per cent. in 1944 and again started rising until it was 5.5 per cent. in 1949 and then fell down again coinciding with the Korean war. One may reflect on the occurrence of the two wars, the degree of unemployment that existed in the U.S.A. when the wars were not there, the intensity of industrialisation in that country and its advertised capacity to provide full employment. The fall of the Government together with the economic collapse of the U.S.A. and the "New Deal" in the early thirties, in spite of the fact that the country was very highly industrialised, are well known.

6.3. That the socio-economic structure of life in Calcutta is still intact, is a tribute to the joint family system which still survives in the life of this State in a very large measure, as I have shown in my report on the family budget studies. It is very necessary to remember this point while planning industrial development in this country, care being taken to see that the joint family system of life is least disrupted.

6.4. One should not, however, minimise the urgency of the situation by being too optimistic about the capacity of the joint family system to absorb shock. The above facts, therefore, raise a question of policy about old age pension, compulsory national service, restriction of working hours, restriction of employment of the marginal labour force, etc., with which this plan is not concerned. It may, however, be noted incidentally that in similar circumstances of unemployment, and even as a permanent measure, the highly industrialised countries have pursued active policies in respect of the above. It may also be noted that there are two very notable examples in recent history of effective action being taken on the lines of national-social service to meet the circumstances created by unemployment of such magnitude as now prevails in Calcutta. The "New Deal" government of President Roosevelt of the U.S.A. did away with the patchwork of its predecessor of public assistance in the States and municipalities and organised an Emergency Relief Programme. The first part of this programme was intended to soften the impact of unemployment on young unmarried men. A Civilian Conservation Corps was enrolled to take boys to camps on forest and other lands. In two years they had planted millions of young trees, built thousands of dams, laid tens of thousands of miles of roads, fought hundreds of forest fires and raised observation posts and telegraph lines. In the second part of the programme, called the Civil Works Administration, there were 4 million names in the register. Work was distributed through local authorities for painting public buildings, laying out recreation grounds, etc. It is also well known that in similar circumstances of unemployment the National Socialists of Germany, which country was a pauper at the time, built innumerable sports stadiums and thousands of miles of magnificent two-way roads, which were eventually found to be capable of coping with the tremendous movement of Hitler's mechanised armies. It may be stated that all these public works of opening up communications, etc., contributed towards the eventual prosperity of these countries.

6.5. Keeping aside the question of emergency measures, as aforesaid, to be taken in a crisis like the present, one may remember the fact that even a highly industrialised economy is vulnerable to unemployment, as indicated by the above description of conditions which prevailed for long periods in the U.S.A. and Germany. The fact is that the so-called standard of living in a highly industrialised country is fast approaching a point wherefrom it cannot look very much forward. This is particularly true of the U.S.A. As a result, the rate of increase of the standard of living cannot keep pace with the rate of increase of the volume of production, which is necessary to provide full employment under an increasingly rationalised system of production. This state of

affairs provides the main driving force of the American policy of increasing the standard of living in other countries and also largely explains the anxiety of the American Government and its reversal of policy for the development of small enterprise in the U.S.A.

6.6. The above facts illustrate that a high degree of industrialisation, by itself, is no guarantee for full employment. One ought to think, therefore, how best to make the labour force as well as the society in general as resilient to shock as possible. A logical method of approach would be to distinguish between the foundation and the superstructure. In this context one might say as follows:—

- (1) The main labour force must be made least vulnerable so that, the marginal labour force may fall back on it in time of a crisis.
- (2) The production of essential services, such as, defence, municipal services, production of electricity and other forms of power and the civil government including health and educational services, irrigation, communication, etc., and the production of primary industries and such secondary industries as produce the where-withal for meeting the primary necessities of life, should be taken as far beyond the sphere of disturbance as possible by a strict control of rationalisation, wherever applicable.
- (3) Production of non-essential goods and services should be undertaken mainly with the marginal labour force and may be left open to competition subject to such control as may be necessary for equitable distribution of income and ensuring free enterprise.

6.7. If (1) above is entirely geared on to (2) leaving only (3) vulnerable to competitive forces of rationalisation, etc., normal life could be expected to go on least disturbed. In order to ensure this, the production of the goods and services enumerated in (2) above must be carefully estimated and fixed at targets which would satisfy the normal needs of the population. The work producing these goods and services should be distributed amongst the entire main labour force, equity being ensured by the fixation of parity prices, wherever necessary, and at a premium, wherever necessary for the purposes of ensuring equity of income as between the main labour force engaged in the production of essential goods and services and the marginal labour force engaged in the production of non-essentials. This is a very necessary condition even in a highly industrialised economy. In the U.S.A. the prices of agricultural commodities have been maintained at a high level on parity basis for many years by strict Government control.

6.8. The permissible degree of rationalisation of mechanisation in the sphere of activity of the main labour force shall be determined entirely by two factors only, namely, (1) the quantity of essential goods and services required by the nation, to be fixed by Government policy under the advice of the leaders of thought and (2) the number of the main labour force. Full employment of the main labour force shall be a necessary condition. If the labour force is larger than what could be employed in a mechanised process, as it undoubtedly is at present as evidenced by the volume of unemployment, and has been so for many years and is likely to be so for many years to come unless the growth of population is somehow retarded, then the obvious policy is derationalisation commensurate with the degree of unemployment that exists. In this context the charkha is not a mere symbol for contemplation but an active principle for the maintenance of socio-economic stability.

6.9. If in any sector of production of essential goods and services mechanisation is a necessity for technical reasons for the purposes of supplying the required volume, say, for example, if there is a shortage of food and it is proved that the use of a tractor would increase the yield of crops per unit of area without doing any harm to the land, then mechanisation shall have to be adopted but, in such case, it shall be a necessary condition that the resultant unemployment must be balanced by increased production of essential services or further derationalisation of other sectors of production of essential goods or by transferring some goods and services from the non-essential class to the essential.

6.10. If any production process in the essential sector is of a periodic type, as in agriculture, certain secondary productions of the same sector must be earmarked for the main labour force engaged in such periodic activity, as would ensure their full employment. For example, the manufacture of rice, wheat flour, mustard oil and other vegetable edible oils, etc., which are essential secondary productions, should be earmarked for the agricultural population, if it is found that the main labour force in agriculture is not fully employed, which, it undoubtedly is not, at present.

6.11. The employment of marginal labour and the production of non-essential goods and services must be made subservient to the employment of the main labour force and production of essential goods and services. The extent of employment to go to marginal labour shall be conditioned entirely by the circumstances of full employment or otherwise of the main labour force. Of course, certain classes of marginal labour may be declared to be main labour in certain specified types of production of goods and services. This must, however, be strictly controlled and guided by well defined principles enunciated at national level. The main point is that indiscriminate competition between the main labour force and the marginal labour force should be discouraged.

6.12. Contrary to popular belief the overcrowding of the market for employment by the marginal labour force, such as, young girls, women, and old people in the U.S.A. and other western countries, is not an expression of freedom but an evidence of economic necessity, as pointed out earlier. For example, the "Fortune" survey (April, 1945) amongst a cross section of the population of the U.S.A. revealed that only 5 to 8 per cent. of the total population really wanted their sons and daughters to do something for earning money immediately after leaving school. The school leaving age in most of the States is 16. In some States it is 17 to 18 years. The Canadian Institute of Public opinion poll (October 17, 1945) indicated that only 25 per cent. of the women wanted equal chance with men, whereas, 62 per cent. of them wanted the men to get the first chance. The others were indifferent. Even during the last war, when England was on her last legs, 23 per cent. of the population expressed disapproval of the women being compelled to do even war work. An authority in England has written. . . . "It is possible that only 16 per cent. of all women are positively in favour of women working under any circumstances." Regarding married women the attitude is even less favourable. Asked whether married women, without encumbrances should or should not be allowed to take a job, if they wanted to, only 41.6 per cent. of the women of the U.S.A. (Fortune Survey, August, 1946) expressed the view that they should be allowed, the others either said that they should not be allowed or were indifferent. In the Finnish gallup poll (September, 1946) only 28 per cent. of the population were of the view that married women should not give up their jobs. The remainder wanted them to give up their jobs or were indifferent. Of 305 cities (containing 30,000 or more population) of the U.S.A. which reported to the National Education Association in 1941, over half stated that married women were not given appointments as new teachers. During the unemployment crisis of the thirties as many

as 26 States of the U.S.A. had introduced Bills in their legislatures trying to put up effective bars against the employment of married women. During the last war a big telephone company of New York was actually brought before the War Labour Board for discriminating against married women.

Regarding older workers I can again repeat that the old men and unattached women of the U.S.A. seek employment because they must. To illustrate my point I may quote from a volume recently published by two professors of Economics of the U.S.A. both of whom had held very high and responsible jobs in the Government of the U.S.A. : "With the greatly increased numbers of older persons and the vastly increased expenditure for retirement, medical and welfare programmes over the last couple of decades, society may decide to utilise these people as productively as possible". This uncharitable attitude towards the aged and the infirm is the direct result of the high standard of living consequent on the high speed of production and the disruption of the joint family system.

6.13. In order that the main labour force may not be placed at a disadvantage in respect of income, rationalisation of both capital as well as labour in the production of non-essential goods and services shall have to be controlled to the extent that income in such production would not violently disturb the parity prices fixed for the essential sector of production.

6.14. An essential condition in both the sectors of production, however, is that production shall be so organised that there is the least disturbance of the joint family system of life. The stabilising force of this system has already been illustrated earlier. An advocate of rationalisation should understand that the joint family is a highly rationalised system of living. It reduces strife and competition and encourages combines amongst persons having the closest possible natural ties and thereby increases the sustaining power of a number of persons belonging to the main as well as the marginal labour force, who bargain as a single unit in the struggle for existence. This is rationalisation par excellence. It would therefore appear to be an obligation of the Government as well as a necessity for its own stability, to preserve and encourage joint family system of life. Science and the technique of standardisation should be increasingly harnessed specifically for the purpose of decentralisation of production, however complicated the process may be, so that, the ultimate vendor of production may go to the family and not the family to the vendor. Where production must be centralised for technical reasons the family should be given primary consideration and not the machine. It is, therefore, an imperative necessity that provision for living accommodation for the labour force as family units should be made a pre-condition for the setting up of an organisation of centralised production. Failure to make such provision is an offence against the nation.

6.15. As stated earlier, rationalisation in the sector of production of essential goods and services should be strictly controlled. A necessary observation in this connection is that there should be as many small entrepreneurs as possible. In connection with the discussion on conditions now prevailing in the U.S.A., it was pointed out that a large number of free enterprisers or self-employers was a necessary condition for the survival of free thought and action. Every unit of production in this sector should therefore be as small as possible, preferably restricted to self-employed members of the same family. Wherever necessary, a system of compulsory apprenticeship could be enforced as would ensure the maintenance of the supply of the required number of trained workers, who could be expected to set up their own units of production after a stipulated period of training. Any size bigger than this could be permitted only for technical reasons, that is, to enable the establishment to function as a balanced unit of production. There may be families in which there may not be a

sufficient number of helpers. In such cases the head of the family should be encouraged to employ persons indirectly related to him rather than hire perfect strangers.

6.16. Regarding the other object which necessitates production, namely, adequate supply of goods and services for the maintenance of life, it has already been indicated in connection with the discussion on full employment, that it would be necessary to distinguish between essential goods and services and the non-essential. It was also indicated that the aforesaid classification into essential and non-essential goods and services would probably have to be a dynamic process conditioned by the volume of production required for meeting the essential needs and the number of the main labour force. Goods which are to be considered as essential needs could not be selected by the leaders of thought in the country. One could, however, start by classifying food, clothing and housing products and the accessories required for producing these goods as essential. Depending on the number of the main labour force available for production, after meeting the requirements of the essential services, all essential industries, both primary and secondary, required for essential needs should, therefore either be completely derationalised or partially derationalised with the help of cheap electricity, which is expected to be made available shortly. As stated earlier the degree of such derationalisation shall be determined entirely by the volume of production required for essential needs and the number of workers in the main labour force. If the volume of production required for essential needs is large and the number of the main labour force is small, there should be rationalisation; if contrary is the case, then there should be derationalisation accordingly.

6.17. Details are outside the scope of this note. I may only state that for many of the items of production of even the essential sector, it will be found that only partial derationalisation is possible or necessary in the circumstances of the present times. Prejudices regarding occupation, which still persist, may limit the number of available main labour force in some cases. Moreover, in the non-essential sector, where free enterprise is proposed to be permitted within wider limits, it is necessary to examine how it is possible for the small enterpriser to maintain efficiency of production with minimum rationalisation within any production unit. Evolution of such a technique of partially rationalised system of production is a difficult task. But it has been done in Japan on a very large scale and to appreciable extents in some other countries with the help of continuous research. In order that such research may be carried on effectively it is very necessary that the Government should set up high-powered institutions to go into an examination in detail about the organisational as well as the technical aspects of such a procedure. The results of such research should be made available to the Government as well as the public. One could suggest that there should be several national laboratories for the purpose. It is not possible to go into details about the procedures in this note. But it may be briefly indicated that in matters of organisation the research institution could, in the first instance, undertake the task of establishing standards for unit costs at various stages of production for each and every industry, taking into account the standard methods of production, which could be fixed on consideration of the technological aspects and the circumstances which might prevail in any industry in any particular area. Standards might, therefore, differ from place to place.

Regarding the technical aspect of research it may briefly be stated that it would be necessary to make a three-pronged approach, namely, (1) to examine each mechanical operation, now being carried out by heavy or complicated machinery, to see if the work could be done by smaller and simpler machines;

(2) to examine each set of operations in a multi-stage manufacturing process to see if any or all of the stages or any or all of the operations in a set could be physically isolated with a view to partial or entire decentralisation of production and (3) to examine each complicated machine with a view to see if any or all of the parts could be manufactured in small units of production with or without the aid of power, with a view to partial or entire decentralisation of production of machines. Another line of action may be the examination of the factors of the so-called 'balanced unit of production' of large industries. It has been stated earlier that work on this line in the U.S.A. has proved that many of the industries need not be as big as they are at present (*vide* quotation from the Report of the President of the U.S.A. in paragraph 3.9). It has also been proved in this country. It is not perhaps generally known that there are several tiny jute mills round about Calcutta which compete successfully with their rivals many times bigger than themselves in size.

Wherever partial or entire decentralisation of production is found to be feasible, the research institution will have to concentrate on the development of the technique of standardisation of quality, dimensions and performance. Tolerance limits, usually set for machine parts by the designers, are in many cases unattainable and very often unnecessary. It will, therefore, be one of the important duties of the research institution to re-design the machines permitting more elasticity in the demand for tolerance limits, with a view to be able to produce the goods on less precise machines, which could be easily handled by the village craftsmen. It is well known that Japan at one time was successfully copying almost every kind of machine by adopting the aforesaid technique and was, in fact, accused of infringing upon the patent rights of machine manufacturers all over the world. It may be stated here that it is not necessary to infringe upon the patent rights of any manufacturer. There are a good deal of machines in which there are no patent rights at all. Moreover, the research institution proposed above would actually be required to produce new designs as would enable the machines to be manufactured under a decentralised system of production. It is not possible to give in this note any further detail about the machinery or the goods which could be manufactured successfully under a derationalised system. I have already pointed out earlier that, in between the two wars, more than 50 per cent. of the industrial production of Japan was actually carried out in small establishments employing not more than five persons and that about 60 to 70 per cent. of the total exports of Japan during that period came from small industries of the above type and not from the big factories. I may also point out that, not many years ago, even steel was being produced on a small industry scale in Scandinavian countries.

6.18. The above institution for research will work for increasing the efficiency of technical and internal organisational aspects of production in small industries. But there is the very important question of external organisation, namely, that of capital, purchase and sale. I have indicated how Japan has done it by introducing legislation with a view to secure maximum rationalisation through a rationalised system of co-operatives under Government patronage. Only such a rationalised co-operative system, and not the co-operative system as now exists in the State, can enable the small producer of goods and services to compete successfully with the formidable forces of rationalised capital and labour.

6.19. **Summary of plan.**—(i) Broad policies, to be pursued at national level, have been indicated in respect of production and employment, illustrated by available statistics. It would appear that a reversal of policy is essential in order to ensure ultimate success of any plan for the provision of full employment and sufficient goods and services for consumption.

(ii) Regarding the immediate problem of unemployment, one could only think, as a short-term policy, in terms of national-social service, as was done in the U.S.A. and Germany in similar circumstances. Facts have been given. Piecemeal Government aid here and there will not touch even the fringe of the problem and the Government money, so invested, would probably be largely wasted. The failure of such a policy prior to the "New Deal" Government of the U.S.A. is a glaring example.

(iii) Unless it is the policy of the Government to allow the field of activity of the small enterpriser to shrink further and further, to be replaced by big enterprise, the Government should, as a long-term policy, establish (a) several institutes for research for developing organisational and technological technique of partially decentralised and decentralised system of production and (b) a rationalised co-operative system through legislation. Examples of what is being done in other countries have been given.

(iv) Besides the above patronage, the small industries should receive effective active support of the Government in the form of taxation relief, as in the U.S.A., and if such relief is insufficient, indirect relief should be given through direct imposition of taxes on competing rationalised industries, based on the total production, and not on the profit, on a slab system at increasing rate, as would serve as a check on the tendency for further rationalisation.

(v) Advantage should be taken of the conditions described in paragraph 3.3, other than Government intervention, namely, (a) local patronage, (b) selective customers, (c) contest between capital and labour and (d) economic circumstances.

It is a fact that local patronage or sentiment is much stronger in the rural than in the urban areas. It should, therefore, be a policy of the Government to decentralise production of all consumer goods, by distributing small establishments uniformly all over the State and give assistance in respect of the sale of the local products through district-wise propaganda.

Regarding the sale of goods to selective customers, it will first be necessary to make a proper selection of goods from amongst the innumerable products coming out of small industries, particularly from the sector of arts and crafts. It will then be necessary to select places all over the country where selective customers are likely to exist in fairly large numbers. Such selected articles would naturally come from different centres within the State. In big cities like Calcutta there will also be several centres where there would be selective customers for purchasing such goods. The production as well as the selling centres should be integrated into a rationalised co-operative system. Instead of the selective customers having to go to a museum or an exhibition, the goods should be taken as near to the customers as possible. In this respect the above-mentioned rationalised co-operative might emulate the example of the chain stores like those of the Bata Shoe Company.

The contest between capital and labour is a disadvantage within the rationalised system of production. The small industries should take the maximum advantage of this fact and cut down the profit motive by a reduction of the ratio between the hired labour and family labour. In fact, the small industries should be carried on mostly by family labour with the assistance of an organised system of apprenticeship, except in those industries where larger size is necessary for technical reasons.

As in the case of selective customers, an integrated system of co-operative enterprise should also be organised for collecting the inferior products coming out of these small industries and selling them through a system of chain stores situated in localities where poor people live.

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Statistics  
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The plan proposed in this note is a balanced derationalised system of production organised on a highly rationalised system of co-operatives.

**6.20. Concluding remarks.**—It may be observed that what has been proposed in this note is not wholesale or indiscriminate derationalisation of production methods. What has been advocated is a system of controlled rationalisation with a view to secure (i) undisturbed supply of primary necessities of life and (ii) full employment for the main labour force, as would ensure socio-economic stability. The system also ensures the preservation of the joint family and guarantees freedom of thought and action by encouraging free enterprise and maximum opportunity for self-employment. It is also designed to check the totalitarian tendencies of rationalised capital and rationalised labour. Competitive production on a rationalised basis, however, is permitted in the production of non-essentials including luxuries. A balance between the two sectors of production is sought to be obtained through a system of parity prices. An attempt has been made to obtain maximum co-ordination between the volume and agency of production, as could be expected to ensure maximum resilience of the socio-economic structure to impacts from inside as well as outside.

Derationalisation in some of the sectors as proposed above would certainly reduce speed of production in these sectors. This is necessary to satisfy the condition of full employment for the main labour force. The fact that there is a very large surplus of man-power cannot be ignored. It might appear at first sight that less speed of production would reduce wealth. This, however, is an erroneous concept. As long as the total value added by manufacture remains the same, the total production of wealth also remains the same and it is immaterial how many persons produce the total value added and in what time provided, of course, that speed is not so lowered that surplus of man-power is actually reduced to a shortage. In other words, as long as there is a surplus of man-power, for whom no avenue of employment can be found, speed of production is not an advantage. In fact, it is a disadvantage from the point of view of the premises from which we started, namely, that full employment is a necessary condition for normal and healthy social life.

"Value added" by manufacture is the value of the finished product minus the value of raw materials, consumable accessories, fuels, etc. If the values of the finished product and the raw material remain the same, then value added will also remain the same provided, the value of the consumable accessories, fuels, etc., remains unaltered. It is clear that if the consumable accessories, fuels, etc., are reduced, the total value added will increase accordingly. In other words, the total earning of the industry per unit production will increase. Taking the example of rice industry, one might say that if the prices of finished rice and paddy were controlled, as they have been for sometime, then the value added by hand-husking would be larger than the value added by rice mills because we shall have cut out cost of coal, engine oil, electricity, consumable accessories, etc. In other words, hand-husking would produce more wealth than what the rice mills are doing. It will also increase national income to the extent that imported articles, consumable in the mechanised process, would be reduced. Rice mills, of course, would produce more units in a given time and will throw out a large number of workers in the process as they have already done in the State. Since alternative avenues of employment cannot be found for these people, who have been thrown out, mechanisation in this case has not been an advantage. In fact, it has adversely affected full employment and has, at the same time, reduced national wealth. The only argument against derationalisation in this case is that people will have to use their hands for doing things which could be done by machines. One might say that it is a retrograde step. The answer would be that however retrograde it might appear from the mechanical point of view, it is sound morally as well as economically because, firstly, it



would ensure full employment and secondly, it would increase value added as well as national income.

However attractive it may appear to be, rationalisation of production is not justifiable, either on moral or economic grounds, unless the system as a whole is capable of absorbing the surplus man-power which is thrown out by the speed of production. One may argue that the remedy is not to be sought within the industry itself and that other industries should be created to absorb the surplus man-power. This involves three major questions, namely, (i) whether the country is capable of creating more industries and if so, (ii) whether it is prepared to engage itself in an ever-increasing spiral of production because the process of rationalisation would continuously throw out man-power and if so (iii) whether it is prepared to accept the totalitarian principles of capital and labour, which is the inevitable result of rationalisation.

It has been illustrated by examples of the U.S.A. and Germany that even a very highly industrialised economy is seriously vulnerable to unemployment, which overthrew the Government in the U.S.A. and introduced aggressive National Socialism in Germany. One is apt to forget that the craving for more and more goods is bound to reach a saturation point and that the rate of increase of the so-called standard of living cannot possibly keep pace with the progress of uncontrolled rationalisation which continuously harnesses to its service every new scientific invention. Considering the effects of all these possibilities one is forced to think that uncontrolled spiral of production would continuously throw the social and economic structure out of gear and there is a danger that this will eventually lead the country into an aggressive policy of export and expansion, unless the totalitarian forces of rationalised capital and rationalised labour are properly harnessed by a reversal of policy while there is time yet.

Loss of speed in small industries, however, is counterbalanced to a large extent by increased efficiency of supervision. Further, the small industries require very much less capital investment than rationalised industries for equivalent employment. Moreover, there is continuous contest between capital and labour in rationalised industry for allocation amongst themselves of the value added by manufacture. The motive for profit on the part of the capitalist is very strong. In fact, unless he can extract a margin of profit as a result of exploitation of the labour force, he will face liquidation. In the case of small industry the urge for profit is not imperative. As it is expected to be carried on mostly by family labour the profit motive might be eliminated altogether, if necessitated by circumstances, provided the receipt of the bare value of labour was assured. Hired labour being practically non-existent, all contest between capital and labour disappears in small industries. Loss of production by strikes, lock-outs, etc., would therefore be eliminated. A balanced derationalised system of production could, therefore, supply the necessary goods.

The process of rationalisation leads to heavy concentration of production into single units. Workers are, therefore, uprooted from their family surroundings, which leads to disruption of the joint family system. The majority of the big industries of the State has not yet been able to provide for family quarters for their employees even after more than 50 years of development. This not only disrupts the joint family, it also demoralises the population and seriously upsets the socio-economic structure of society and renders it susceptible to destructive political forces.

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